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PROCEEDINGS

OF THE

Seventh Annual Meeting

OF THE

California Pharmaceutical Society

ALSO OF THE

THIRD ANNUAL MEETING AND COMMENCE-
MENT EXERCISES

✓ OF THE

CALIFORNIA COLLEGE OF PHARMACY,

ETC., ETC.

SAN FRANCISCO:

D. L. SWETT & COMPANY, BOOK AND JOB PRINTERS,
No. 420 Clay Street, Below Sansome.
1875.

(4) prospectus p. 59
1876



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LIST OF OFFICERS
OF THE
California Pharmaceutical Society.

PRESIDENT :
WILLIAM M. SEARBY.

VICE-PRESIDENTS :
EMLEN PAINTER,
A. GROS.

TREASURER :
WILLIAM J. BRYAN.

SECRETARY :
G. G. BURNETT.

BOARD OF TRUSTEES :
WM. T. WENZELL, WILLIAM GEARY,
JOHN CALVERT, G. G. BURNETT,
A. M. KURTZ.

PREFATORY NOTICE.

At the regular monthly meeting of the California Pharmaceutical Society, held on the evening of November 10th, 1875, the undersigned were appointed a Committee to edit and publish the "Proceedings of the Society," together with such matter pertaining to the COLLEGE OF PHARMACY AND BOARD OF PHARMACY as might be deemed of interest to our members.

It will therefore be noted that, besides the Proceedings of the 7th Annual Meeting, this volume also contains papers and essays read by different members at the meetings of the SOCIETY during the year, a report of the proceedings at the third annual meeting of the CALIFORNIA COLLEGE OF PHARMACY, and the annual commencement exercises of the same, with abstracts of two of the theses of the graduating class, and the report of Mr. William T. Wenzell, the Secretary of the SAN FRANCISCO BOARD OF PHARMACY (which received special commendation from the officers and members of the Pharmaceutical Society). A prospectus of the COLLEGE OF PHARMACY is also published, with a list of written questions submitted to aspirants for the degree of "Graduate of Pharmacy" at the last annual examination.

In the absence of any annual address from the President of the Society, the Committee have deemed it proper to offer a few suggestions here, which otherwise might be considered somewhat out of place, and request the indulgence of their readers.

Since the publication of our last volume of "Proceedings" the proposed SCHOOL OF PHARMACY has become established, and not only placed upon a sound financial basis, but by incorporation with the University of California, according to the liberal terms of the Charter or Organic Act of incorporation of the same, is invested with an added dignity, which it seems to us well worthy of imitation by our sister States.

The experience of the past few years has doubtless benefited the professors as well as the pupils, and the series of lectures illustrated by the necessary experiments, will be quite as interesting, and more exhaustive in their treatment of the subject matter, than ever before.

The removal of the College to the hall of the Medical Department of the University, while being financially a benefit, has placed at the disposal of the professors and pupils a more elaborate apparatus and greater amount of room—quite an advantage where class lectures are given.

The Second Annual Commencement of the COLLEGE OF PHARMACY was held at the Hall of the Young Men's Christian Association, on the evening of October 12th, 1875, and well attended by the relatives and friends of those immediately interested. The young men acquitted themselves with credit, and the remarks of the Professors were charged with wisdom and experience, and received with the interest due the speakers, and the themes presented.

The theses of the graduating class show, in most cases, diligent application, and a promise of future excellence, gratifying indeed to those who have labored so earnestly in the past for the advancement of the art of Pharmacy in California. Two have been selected as worthy of notice, and an abstract of each will be found in this volume, though no more worthy of notice, perhaps, than two others that we could not so briefly make extracts from, and convey the meaning intended. It would have been a pleasant duty to have incorporated them all in this year's Proceedings, but the want of space forbade, and we have selected enough to exhibit the character of the studies and the results of the training of the students.

The COLLEGE OF PHARMACY, being the outgrowth of the CALIFORNIA PHARMACEUTICAL SOCIETY, will doubtless in time absorb the parent association, as concentration of effort seems to attain to the highest good. Already the subject of the union of the Society and the COLLEGE OF PHARMACY into one body has been advanced, and it remains for us all to meditate upon the desirability of the change, whereby much confusion now observable would be avoided.

The minutes of the 7th annual meeting of the CALIFORNIA PHARMACEUTICAL SOCIETY will be found to be nowise deficient in interest and variety to reports of preceding years, and whilst the College and Society are under two systems of government, the interest felt in the parent Society will doubtless be continued.

Some needed revisions to the "Pharmacy Act" will be presented to the next session of the California Legislature, and no doubt receive the hearty endorsement and approval of the assembled State Representatives. It is interesting to know that the Medical Profession intend presenting a bill providing for registration and examination, to the same law-making body. It were well, perhaps, if the framers of the bill would take a lesson from the various "Pharmacy Acts" in force in different States in the Union, and rely upon the future for restraining abuses that exist in the present, and are difficult, if not next to impossible, to suppress.

The Twenty-fifth Annual Meeting of the American Pharmaceutical Association was held last September at Boston, Mass. It was more than ordinarily interesting, and larger in point of attendance, than ever before.

Next year the Association will hold its 26th meeting in Philadelphia. May we not extend to them an invitation to meet with us in 1877?

Much interest is manifested in the growth of our Society and College by those members of our own and the medical profession residing in the neighboring States. They are regarded as a means of elevating the character of the profession of Pharmacy, and the hope of all who desire the standard of education raised. Let one and all contribute their quota to the

common stock of intelligence, and assist by their individual efforts in spreading a knowledge and just conception of our aims and purposes among the world surrounding us.

In conclusion we would remind those who have at times almost despaired of the work, that time improves and strengthens all good purposes, and that the seed sown is sure to give a good harvest in the coming years.

EMLÉN PAINTER,
JAMES G. STEELE,

Committee on Publication.

Minutes of the Seventh Annual Session
OF THE
CALIFORNIA PHARMACEUTICAL SOCIETY.

The Seventh Annual Meeting of the PHARMACEUTICAL SOCIETY was held on the evening of the thirteenth of October, 1875. In the absence of the President, on account of sickness, Mr. Emlen Painter, the Vice-President, occupied the chair.

The Secretary's minutes of the previous meeting were read and approved.

The nominations for officers to serve for the ensuing year were made, and the nominations declared closed.

The reports of officers being next in order, no report having been received from the President, the Secretary reported as follows:

REPORT OF THE SECRETARY.

SAN FRANCISCO, October 13th, 1875.

To the Officers and Members of the California Pharmaceutical Society:

Your Secretary would report that during the year since the last annual meeting the customary number of monthly meet-

ings have been held, with a fair average attendance. Three papers, or essays, have been read at different meetings, as follows:

“Ethics of the Profession,” by Emlen Painter; on “Suppositories” by G. G. Burnett, and “Syrup Iodide of Iron” by Max Tschirner.

This feature of our meetings is a useful, as well as entertaining one, and it is gratifying to know that we are promised papers, from various members, upon topics of vital interest and importance in the coming year.

I have collected since our last annual meeting the following sums:

In December, 1874.....	\$ 96 00
In February, 1875.....	102 00
In June, 1875.....	99 00
In October, 1875.....	98 50
	<hr/>
	\$395 50

And disbursed the following:

June 23, 1875, Paid to Wm. J. Bryan, (Treasurer).....	\$225 00
October 24, 1875, “ “ “ “	130 95
“ “ “ Paid Collector.....	39 55
	<hr/>
	\$395 50

Our membership shows no diminution, but the few withdrawals during the year have been more than met by new members. About seventy active members meet the requirements of the Constitution in the regular payment of quarterly dues. The country members are not so prompt as could be desired, and attention is called to the clause in our By-laws which makes it obligatory upon the Board of Directors to submit the names of members largely in arrears to the Society, for the requisite action to be taken thereon.

The meetings during the year have been held in a room adjoining the Pharmacy of Messrs. Painter & Calvert (corner of Clay and Kearny streets,) these gentlemen having kindly

offered the use of the room to the Society without charge, thereby effecting a material reduction in our running expenses.

The third annual commencement exercises of the COLLEGE OF PHARMACY, held last evening, shows the success of the infant school, which, as we all know, was the direct result of the existence of our Society. It is a fact somewhat to be deplored that the active interest taken regarding the Society seems to be confined to so few, and it is incumbent upon all, particularly the younger members, to evince by their attendance at our meetings, and assistance in debate, etc., their appreciation of our Association, and a recognition of the fact that progress in Pharmacy, as in every other art, requires continued effort and attention on the part of her votaries. I would remind the members that during the past few years the Society has obtained, through subscription and by purchase, quite a large number of bound volumes, pamphlets and papers. These, it is evident, will be of great value to the professors and students of the COLLEGE OF PHARMACY, and as the members of our Society can have access to such collection at any time desired, I would respectfully suggest that we at once freely donate all such literature to the College. All of which is respectfully submitted.

G. G. BURNETT,
Secretary.

The report of the Treasurer being next called for, Mr. Wm. J. Bryan submitted the following :

REPORT OF THE TREASURER.

SAN FRANCISCO, October 13th, 1875.

To the President and Members of the California Pharmaceutical Society—Gentlemen :

Your Treasurer would respectfully submit to you as his Annual Report the following statement of the condition of the finances of the Society:

Balance on hand Oct. 13, 1874.....		\$438 22
Received during the year ending Oct. 13, 1875, from Mr. W. T. Wenzell, Secretary of the Board of Pharmacy.....	\$235 25	
Received during the year ending Oct. 13, 1875, from the Secretary of the Califor- nia Pharmaceutical Society.....	355 95	591 20
		<hr/> \$1029 42 <hr/>

The following disbursements have been
made during the year:

Cash paid for paper and stamps.....	3 00	
“ “ Winterburn & Co., postal cards and printing.....	19 00	
Cash paid <i>American Journal of Pharmacy</i> ...	3 10	
“ “ rent of Room No. 128 Montgom- ery street, from November 1st, 1873, to expiration of lease.....	211 00	227 10
Balance on hand.....		\$802 32
		<hr/> \$1029 52 <hr/>

WILLIAM J. BRYAN,
Treasurer.

ELECTION OF OFFICERS.

The nominations for officers to serve the ensuing year having
been previously made the meeting proceeded with the election,
and the following named gentlemen were duly elected :

President—WILLIAM M. SEARBY.
First Vice-President—EMLÉN PAINTER.
Second Vice-President—A. GROS.
Treasurer—WILLIAM J. BRYAN.
Secretary—G. G. BURNETT.

Board of Directors.

WM. T. WENZELL, WM. GEARY,
JOHN CALVERT, G. G. BURNETT,
A. M. KURTZ.

The Treasurer was directed to deposit \$750 of the money on hand belonging to the Society in the Odd Fellows' Savings Bank, subject to the joint order of the President and Treasurer. The Secretary was instructed to renew the subscriptions to the *Pharmaceutical Journals*, and add to the list the *American Chemist*.

A report was read from Mr. Wm. T. Wenzell, the Secretary of the San Francisco Board of Pharmacy. This report gave the transactions of the Board from May 1st, 1874, to the present time. There had been collected by Mr. Wenzell during his term of office the sum of \$322.50 from Registrations and Certificates of "Licentiate in Pharmacy," and disbursed the sum of \$30.25; paid into the hands of the Treasurer of the CALIFORNIA PHARMACEUTICAL SOCIETY the sum of \$235.25; leaving a balance in the hands of Mr. Wenzell of \$57. During the time between May 1st, 1874, and October 1st, 1875, there had been registered 123 *Pharmacists* and 94 *Assistant Pharmacists*. The total number of retail drug stores in San Francisco amounted (October 1st, 1875) to ninety-two.

The report abounds in well arranged information and various pertinent suggestions, and received the hearty approval of the meeting.

The contemplated "Revision of the Pharmacy Act" was discussed, and the President and Secretary were appointed a Committee to meet with the similar officers of the College of Pharmacy and Board of Pharmacy, and report at the next meeting of the Society.

Meeting adjourned.

G. G. BURNETT,
Secretary.

ON A MATTER OF ETHICS.

By EMLEN PAINTER.

The paying of percentages to physicians, either directly in money, by making valuable presents, giving office rent free, or in any other manner, is the subject of my paper this evening.

That such a practice does exist here, and to a very considerable degree, cannot be denied from the evidences almost daily exhibited; and if we will allow ourselves calmly to consider it for a few moments—setting aside self-interest—we cannot fail to see the injustice of the system, and the disrepute it brings upon us.

It must be borne in mind that our business, or calling, is not a mere trade, and should not be altogether considered in that sense, as it partakes of the character of an art and of a profession, and the paying of percentages, or commissions, that might in other branches of business be legitimate and proper, could not be fair or honorable between druggist and physician.

At the same time, no doubt, some may have begun this disgraceful practice unwittingly, perhaps in self defense, as it would seem, and even continue in it in good faith, actuated by a spirit of enterprise, and ambitious to make a business success, which would be laudable in anyone if he had justice on his side, and could bring sound reasoning to support his position. But it is only false reasoning that can justify it, prejudiced by self-interest and an undue desire for pecuniary gain; a reasoning not unlike that of a clerk who may try to justify, in his own mind, the act of appropriating money from his employer's till. He may reason in this wise, that his services are not paid for in proportion to the service rendered, he is (in other respects) faithful and industrious, and thinks that he does a good deal

more, and works to a much greater advantage for his employer's interest, than another clerk who, perhaps, gets almost double the salary. Hence, he pays himself from the till a little at a time, rather than have the unpleasantness of asking an increase of salary, and perchance run the risk of losing his situation.

That much may be said by way of justifying one in paying percentages is very true. Some may contend that they charge no more than the regular price for the medicines, and share their legitimate profits only with the physician; but even if that is the truth, they deceive the customer by pretending that the price charged is that of the medicine exclusively, whilst in fact a portion of it is an additional fee for the physician to the perhaps very liberal one already paid.

Others again may argue that the physician receives fees from but a small proportion of his patients, whilst the druggist is paid for all the medicines prescribed, hence it is allowable that he may share his profits with the physician in consideration of the patronage he is able to control. But this instance is still worse than the former. The poor patient (who, perhaps, can ill afford to pay for either medicine or advice) is charged an enormous price for the medicine in order to pay the physician, who pretends to have given advice free; and the druggist, not being able to discriminate between those that have paid the doctor's fees and those who have not, charges all patients that additional sum to pay the physician, thus compelling one patient to pay in part for another's medical advice.

Some may say if they do not pay the physician (who is not above being bought) other druggists would, consequently they would lose their trade and ruin their business, which may depend largely upon paid physicians' prescriptions; but does that justify the druggist in being a party to robbing the people? for it really amounts to that. There is no need to argue this point, for if all join to abolish the practice, there will be none left to take the trade of another by offering percentages, and each will be able to retain all that is legitimate.

In like manner I could mention numerous other instances of how the druggist might try to justify his action; but the more

we consider the subject, the worse it appears, and no end of evils arise from the practice. I am considering the matter only as regards the druggist's action, not saying which is the more or the less to blame—he or the physician—but their acting together is the great imposition; a glaring abuse of the faith and confidence of the patient and customer, for he is wholly at their mercy (his purse and his very life); and instead of commanding the respect their positions should inspire, it heaps disgrace upon them, which falls upon the innocent as well as the guilty.

It is also a temptation for the physician to prescribe more than is needed, for the purpose of augmenting his account, and an inducement to order out-of-the-way preparations, when the regular and official ones would answer as well. The custom has also originated, and chiefly sustains, the use of private formulas, arbitrary names, signs and numbers, in writing prescriptions, understood only by the druggist with whom an agreement has been previously made, and which is a practice that cannot be too severely censured.

Nevertheless, I do not contend it is a growing evil. I believe it now to be diminishing. Some are beginning to realize the stigma it casts upon us, and do not further encourage it as they may have previously done.

The practice is becoming more and more disreputable as Pharmacy advances, and we must not here permit stumbling blocks in its way, but keep pace with our fellow pharmacists elsewhere.

A bounden duty we owe our profession, as well as the public, is to exercise our best endeavors to abolish this most pernicious practice. It is far the greatest evil we have to contend with, and the greatest clog to our advancement, and before we can occupy our proper place in the eyes of the community, and command the respect and confidence of our fellow citizens, the practice must be abolished.

Now it is for us to consider how to remedy the evil, and it undoubtedly is a duty with the Pharmaceutical Society to bring its influence to bear upon the subject. As an initiatory step, would it not be well to appoint a committee to draft a series of resolutions to present at our next meeting, and to consult with the

medical societies, and endeavor to obtain their countenance and aid, as the object will be much more easily accomplished by the united action of the two professions? It might also be well to appoint a committee to draft a code of ethics to present to the Society for adoption.

There is still another subject it would be well for us to consider, and refer to that committee, if the Society sees fit to appoint one. And first is for the druggist to discontinue the custom of sending to physicians *prescription papers or blanks*, with their names and addresses printed on them, for that implies a compact between the druggist and the physician, and gives no impression of that kind, whether there exists any agreement or not.

It may not be out of place to also mention another duty we owe to our patrons, and the medical profession especially, and that is not to encourage the sale of "quack nostrums," proprietary and patent medicines, which are sold entirely through extensive advertising. Many of these preparations are dangerous compounds, containing the per-se of mercury, and other drugs, that should never be given indiscriminately, or without medical advice. Besides it is an outrageous fraud upon those who are foolish enough to believe the false representations contained in the advertisements, as if it were possible for one preparation—no matter how beneficial it may have been in one case—to suit every person, or almost every conceivable disease, which many of the nostrums are advertised to cure. Whilst it seems to be, at present, a necessary part of our business to keep for sale whatsoever nostrums there is a demand for, we should not in any way encourage their sale. At present we all do so indirectly by distributing almanacs and circulars, and by allowing our cards to be printed on them, and we therefore, in a measure, *indorse* them.

This custom has prevailed so long that the people now expect to obtain an almanac every year from the apothecary. Would it not be well for us—the PHARMACEUTICAL SOCIETY—to supply this want, and publish an almanac for free distribution by

the members, instead of circulating the advertisements of patent medicine manufacturers? The almanac could also contain, besides the calendar for the year, other interesting and valuable information. We might also solicit some advertisements that would help to pay the expense of publishing.

ON SUPPOSITORIES.

By G. G. BURNETT.

My subject this evening will be the preparation of Suppositories and Pessaries. All of you know how unwillingly the prescriptions of these troublesome, but desirable pain-relievers are oftentimes received, especially when alone in store, with, perhaps, a little flurry of customers at hand, and all anxious to get off in "ten minutes for the Oakland boat," or "twenty to the San Jose train," saying nothing of city patrons with sick babies, or disordered stomachs; all equally desirous of being the first served. The feeling that any suggestions, calculated to facilitate the quick and rapid making of these necessary adjuncts to the healing art would be quite acceptable, has prompted me to select this subject for my paper. The base of all suppositories should be cocoa butter, which is unsurpassed for its bland emollient properties and non-irritating qualities. Our climate is of such a temperature as not to require the admixture of white wax to give it the firm consistence required in warm latitudes, nor thinner ingredients to soften the mass, as necessary in the Eastern winter temperature. Recipes are often received prescribing glycerine as an adjuvant in their manufacture. One of the properties of this article is its rapid absorption of moisture, and when incorporated in suppositories it abstracts from

the mucous surface its aqueous or mucous secretion, and creates an intolerable burning sensation, so that in place of relieving the sensitive condition of the parts, it creates or increases the existing inflammation.

Glycerine, it is true, is added to lotions, and washes with the happiest results, but its eagerness for aqueous absorption is overcome in these mixtures by the menstruum with which it is incorporated. As a rule, therefore, it is well to remember that glycerine should *never* be used as an ingredient in suppositories.

The first step in the manufacture of suppositories is the reduction of the cocoa butter to powder. This is frequently a matter requiring no small amount of patience, as persistent pounding and long trituration, are often requisite to thoroughly and perfectly reduce the refractory vehicle. Quick, sharp downward strokes of the pestle will break the larger pieces, but the heat generated by the friction of the pestle on the sides of the mortar, causes various particles of cocoa butter frequently to reunite, and, if the process is continued, yield the finished suppository with a lumpy appearance, and not the smooth, even surface they should always possess. I can, at this stage of the process, present a point of real value to the practical apothecary, and one that will always yield him his cocoa butter perfectly powdered, and ready for the incorporation of the medicinal ingredients. It is the addition of a few drops of alcohol to the butter while breaking down, which will speedily extinguish all refractory lumps, and produce a perfectly smooth powder. I have never seen this fact stated, and doubt if it is known to any of you, but you will find it well worth remembering. The excipient being ready, the powder or extracts should now be added, and all rubbed together till thoroughly incorporated, and no appearance of "streakiness" appears. The mass now requires softening. Olive or almond oils are by far the best adjuvants, and the operator may add either oil quite abundantly to his mass, so much so that while triturating it he may think the soft paste before him is too thin to work; but the oil quickly unites with the butter, forming a homogeneous compound, which may be compounded with a spatula, trans-

ferred to a pill file, sprinkled freely with lycopodium, rolled with the hand to the proper length, and cut into the required number of pieces. If the suppositories are to be rectal, they should be formed cone-shaped, which may be done by rolling each piece with a spatula, inclining the instrument at an angle of twenty-five degrees towards one end of the suppository. The base can be quickly rounded with the finger. If the mass is made soft enough when the oil is added, the finishing of the suppositories will be quickly and easily done, but if not made soft and easily worked the finishing is tedious in the extreme, for each mass must be warmed in the hand, and is likely to crack, and becoming chilled, split and break up, to the great annoyance of the operator. Vaginal suppositories, or more properly speaking, pessaries—should be operated with in the same manner as the preceding up to the cutting or dividing the mass into the required number of pieces. The finishing of these is speedily accomplished by rolling between the hands until perfectly round or marble shaped. A third style of suppository is sometimes prescribed, called the urethral, varying in size from one-third to one-eighth inch in diameter, and half to two inches in length, and cylindrical in shape. These should be mixed with white wax, about one-fifth the weight of cocoa butter to give it the required firmness. The wax can be melted and added to the butter in a mortar; the balance of the ingredients incorporated, and the process continued to completion. The quantity of the cocoa butter used is usually left to the discretion of the apothecary. I have found the following quantities are the most convenient and desirable: Urethral, 5 to 6 grains; vaginal, one drachm; and rectal, 15 grains. The method of melting the cocoa butter, adding the other ingredients, and pouring into moulds, is one largely followed by apothecaries, but is liable to objections, for unless the moulds are cold enough to immediately chill the mixture the medicinal portion, if heavy, like oxide of zinc, for instance, is liable to settle to the bottom or apex of the suppository; or if volatile, like chloral-hydrate, to rise to the top, and perhaps be dissipated by the heat, and the resulting suppository, when cooled, is indifferently mixed, and should its point become

broken, the relief expected by its administration is lost by the entire absence of its anodyne or stimulant ingredient. Moulds by compression are preferable, but with these even, it requires a nice calculation of the amount required to fill each mould, to properly apportion the amount of the prescribed ingredients. I have no hesitation in saying that the process I have here elaborated will be found the least objectionable of any, and will require but little experience before the operator can dispense handsome specimens of his skill in these necessary adjuncts of the healing art.



THIRD ANNUAL MEETING
OF THE
STOCKHOLDERS
OF THE
CALIFORNIA COLLEGE OF PHARMACY.

NOVEMBER 10, 1875.

OFFICERS OF THE COLLEGE.

President:
WM. T. WENZELL.

Vice President:
MAX TSCHIRNER.

Secretary:
EMLEN PAINTER.

Treasurer:
WM. GEARY.

BOARD OF TRUSTEES.

WM. GEARY,	MAX TSCHIRNER,
WM. WENZELL,	WM. M. SEARBY,
G. G. BURNETT,	EMLEN PAINTER.

FACULTY.

President:
Prof. JOHN LE CONTE, M. D., Pres. Univ. Cal.

JOHN CALVERT,
Professor of Pharmacy.

W. M. SEARBY,
Professor of Materia Medica.

WM. T. WENZELL,
Professor of Chemistry.

HERMANN BEHR, M. D.,
Professor of Botany.

TEXT BOOK.

U. S. Dispensatory and U. S. Pharmacopœia.
Pereira's Materia Medica.—Ed. by H. C. Wood.
Fownes' Chemistry.
Attfield's Chemistry.
Roscoe's Chemistry.
Gray's Botany.

SECRETARY'S REPORT

OF THE

THIRD ANNUAL MEETING

OF THE

Stockholders of the California College of Pharmacy.

The Third Annual Meeting of the California College of Pharmacy was held on the evening of November 10th, 1875, and opened at 8 o'clock, with President Wenzell in the chair. Minutes of the last annual meeting were read and approved.

The President, Mr. Wm. T. Wenzell, next made a brief verbal report to the stockholders of the College, congratulating them on the progress made during the year just finished, and the encouraging prospects for the future of the institution.

The report of the Secretary being next in order, Mr Painter submitted the following:

REPORT OF SECRETARY.

SAN FRANCISCO, NOV. 10, 1875.

GENTLEMEN: Two courses of lectures in the College have terminated since our last annual meeting. The course of 1874 (not being commenced as early as the regularly appointed time) continued until the third week in December, after which time was held the examinations for the degree of the

College, which resulted in conferring the degree of Graduate in Pharmacy upon Mr. John P. Heaney, who deserves special mention here, he being the only one—(of the second course students that were eligible to apply for examination) that presented himself a candidate for the highest honors of the institution; and passed such a satisfactory examination that it is with a feeling of pride and pleasure he is mentioned as our first graduate.

The third course of lectures commenced the second Tuesday in May, 1875, and terminated in September of the same year. The class was much the largest the College has yet had, there being forty matriculants, in lieu of twenty-three the previous session. Sixteen of them being students in the Medical Department of the University, who were given lecture tickets free of expense upon the recommendation of the Dean of the Medical Faculty, pursuant to a resolution passed April 7, 1875. Twenty-six of the matriculants were attending their first course, the others were second and third course students.

The annual examinations took place at Toland Hall, the last three days in September, 1875. Five candidates (who having complied with the previous conditions of the College) presented themselves, all of whom passed the examinations, and have since received the degree of the College.

The commencement exercises were held at the Hall of the Y. M. C. A., Oct. 12, 1875, when the following named gentlemen were publicly declared Graduates in Pharmacy:

ROBERT C. MEYERS,
THOMAS D. GRAHAM,
GASTON E. BACON,
ADOLPH KAHN,
FRANKLIN P. McLEAN.

By a unanimous vote of the College Trustees, honorable mention is made of Mr. Robert C. Meyers, he having the highest standing at the examination.

During the past year we have had no additional subscribers to the stock of the College, though Prof. Wenzell has subscribed

for another share in addition to the one he already had, making 83 shares in all subscribed for by the 64 subscribers.

As the shareholders are entitled to tickets to two full courses of lectures for each share of stock owned by them, there have been issued on account of the stock subscribers 62 full course lecture tickets.

Our income during the past year has been from—

California Pharmaceutical Society—Balance due on account of Lease of Room	
729 Montgomery street.....	\$211 00
Collections from subscribers.....	480 00
Matriculation Fees.....	42 50
Tickets to Lectures.....	30 00
Clock sold to Prof. Searby.....	5 00
Diploma Fees.....	30 00
Total	\$798 50
Balance on hand at last Annual Meeting.....	317 88
	<u>\$1,116 38</u>

EXPENDITURES.

Balance on account of Rooms 728 Montgomery St.....	\$200 00
Gas and Water to April 1st.....	59 00
Printing	88 00
Advertising.....	17 50
Insurance.....	15 00
Janitor to April 1st.....	84 00
Postage Stamps.....	16 25
Car Tickets used in collecting Subscriptions.....	5 25
Chemicals for Lectures.....	12 95
Washing.....	75
Donation to Dr. Behr.....	50 00
Appropriation for Commencement Exercises.....	50 00
Balance.....	<u>598 70</u>
	<u>\$517 68</u>

On hand in the Treasury, together with the interest accrued, and \$2 50 error in the Secretary's deposit with the Treasurer of April 21st.

EMLÉN PAINTER,
Secretary.

The report of the Treasurer being next in order, Mr. William Geary submitted the following:

REPORT OF TREASURER.

SAN FRANCISCO, Nov. 10th, 1875.

To the President, Officers and Shareholders of the California College of Pharmacy :

GENTLEMEN: The following is an account of the receipts and disbursements since our last annual meeting:

November 5, 1874, on hand.....	317 88
December 7, " Cr. by Cash received.....	81 00
" 8, " " " " "	220 00
January 29, 1875, " " " "	120 00
March 15, " " " "	95 00
April 21, " " " "	107 50
July 21, " " " "	117 50
Oct. 20, " " " "	60 00
Nov. 10, " " " " Dividend from Amount in Bank	21 94
" " " " Interest from R. H. & Co. to date	12 31

\$1,153 13

December 8, 1874, Dr. To Cash paid on Warrant No. 136.....	\$200 00
" " " " " " " " 137.....	20 00
" 12, " " " " " " " 138.....	15 00
January 14, 1875, " " " " " " 139.....	50 00
" 29, " " " " " " 140.....	16 70
February 1, " " " " " " 141.....	49 00
March 5, " " " " " " 142.....	21 00
April 10, " " " " " " 143.....	113 00
" 21, " " " " " " 144.....	4 00
June 9, " " " " " " 145.....	25 00
" 21, " " " " " " 146.....	10 00
August 31, " " " " " " 147.....	15 00
October 23, " " " " " " 148.....	50 00
" " " " " " 149.....	10 00

598 70

Balance on hand.....\$554 43

Of the amount in treasury, as per preceding statement, the sum of \$309 91 is on deposit in the bank of the San Francisco Savings Union, while the sum of \$244 52 is still in my hands waiting further disposition.

WILLIAM GEARY,
Treasurer.

After nominations were made and duly declared closed, the following gentlemen were elected to serve the ensuing year as

TRUSTEES OF THE COLLEGE :

Wm. M. Searby, Wm. Geary, Emlen Painter, Wm. T. Wenzell, G. G. Burnett, and Max Tschirner. After remarks by various members, touching upon the past experience, and the future of the College, the meeting adjourned.

EMLLEN PAINTER,

Secretary.

COMMENCEMENT EXERCISES

OF THE

CALIFORNIA COLLEGE OF PHARMACY.

The Third Annual Commencement of the California College of Pharmacy was held on the evening of October 12th, 1875, in the hall of the Young Mens' Christian Association, Sutter street, San Francisco, and was well attended by the relatives and friends of the members and pupils of the College, together with others interested in the advancement of the cause of pharmaceutical education.

The exercises commenced with music, which was followed by a prayer by Rev. Mr. Rexford. Mr. Wm. T. Wenzell (the President), next read the following address to the students of the College :

ADDRESS OF THE PRESIDENT.

Next to that of the physician, there is certainly no profession in which the qualifications of those engaged therein should be more carefully scrutinized than that of the pharmacist. His labor is arduous; his responsibility weighty. Like the physician, he is ready at his post by day and night, to minister to the needs of suffering humanity, and like the physician, also, it often happens that human lives are placed in his hands, and dependent upon his skill and professional sagacity. The community expects that every man who mixes poisons in cer-

tain proportions for its consumption, shall have at least sufficient knowledge of his business to avoid those mistakes by which innocent lives have been and are too often sacrificed. Should his carelessness or ignorance result in death, he can have no valid excuse to offer. The liability of a clerk awakened from his heavy slumber by the tinkling of the night-bell in the small hours of the night, to mistake oxalic acid for Epsom salts, or opium powders for opening powders, is indeed notable, but nevertheless inexcusable. The world is vastly different now from what it was in the days when the houses of Montague and Capulet nursed the olden feud, and when the vendetta was performed with a goblet of poison in one hand and a stiletto in the other. The apothecary in those days had not risen to the level in the social scale which he now occupies. The estimation in which he was held in those times of popular ignorance and feudal tyranny, has been picturesquely described by the great bard of tragedy, in the lines descriptive of the apothecary in *Romeo and Juliet*:

In tattered weeds, with overwhelming brows,
Culling of simples; meagre were his looks,
Sharp misery had worn him to the bones;
And in his needy shop a tortoise hung,
An alligator stuffed, and other skins
Of ill-shaped fishes. * * * *
And if a man did need a poison now,
Whose sale is present death in Mantua,
Here lives a caitiff wretch would sell it him.

But with the spread of knowledge and the elevation of the professor in the scale of intelligence, the profession itself becomes dignified; and to-day, instead of being a mere "culler of simples," he has developed into the chemist, who, by his intelligence, can extract from the very poisons themselves palliatives for almost every human ill. In proportion as the science of pharmacy becomes more complex, greater ability is required of druggists, in order to avoid mistakes, which, in most cases, would terminate disastrously to a portion of the public. With this end in view, colleges of pharmacy are founded, wherein young men are fitted, by a course of systematic study and training, to engage in the business of pharmacutists, with honor and profit to themselves and safety to

their patrons. One of these colleges—the California College of Pharmacy—was incorporated in this State in 1872 by the Legislature, and afterwards received in affiliation with the State University.

The occasion of our meeting here to-night is to celebrate the second annual commencement of the California College of Pharmacy, the last act that severs from the College those young men who have completed their studies. It is due to the Board of Trustees and the Professors forming the Faculty of the College, to say that they have nobly and faithfully, without hope of reward, fulfilled the duties of their respective positions, their only wish being to make the College of Pharmacy a success by furnishing such courses of instruction in the branches of chemistry, materia medica, pharmacy and botany as to provide suitable and adequate lectures to the students in pharmacy. I mention with feelings of unfeigned pleasure the cordial support and co-operation of many leading druggists and apothecaries in this city, who have given not only their influence to place the young institution firmly upon its present footing, but have also as liberally given more substantial aid in becoming stockholders of the College. The future has never looked brighter than it appears at present, and the California College of Pharmacy may be looked upon as an established institution, which it is to be hoped will continue to grow in usefulness second to none. In attaining this wished-for result much will depend upon the druggists and pharmacutists of this city. They can still further assist the College by affording their clerks or apprentices who attend, or may attend the lectures of the College of Pharmacy, also a short time each day for study. I would call attention to the fact that the conference of the teaching colleges of pharmacy of the United States have recommended that a certain standard of preliminary knowledge should be required of every student before he be allowed to matriculate. It cannot be expected that competent and well-informed pharmacutists can well be made out of young men who are not conversant with the principles of arithmetic or grammar. I would recommend a still higher status of pre-

liminary knowledge. The pharmaceutical schools of Europe require that students shall possess a knowledge of the classics, the Latin in particular, as it is the language of the sciences. Again, there is a prospect of the issue of a new Pharmacopœia, to be called the International Pharmacopœia, emanating from the International Congress, which met in St. Petersburg (Russia) last year, and decided to adopt the Latin language as the one in which it shall be published. The apothecary of the present day must form a striking contrast to his Shakespearian predecessor. His knowledge of chemistry, materia medica, pharmacy and collateral sciences makes him indeed skilfull and competent in performing the duties of his profession. A druggist may sell inferior drugs without necessary criminality, but a pharmacist never can. He must be the judge of the wares he handles, for the public expect of him thoroughness in everything pertaining to his calling. His studies are not to stop at the completion of his collegiate course, but his whole life should be a continuation of study and observation. The object and aim of having and sustaining a College of Pharmacy is to educate the rising apothecary to a thorough, theoretical and practical knowledge. The people of to-day demand his highest possible proficiency, and in order to arrive at this standard he should attend a proper course of instruction. I believe that the elevation of this standard of qualification in California will not only benefit the young men who enter the profession, but that its effects will extend to those who are established and recognized pharmacutists, by stimulating these to higher and nobler aims than the mere vending of drugs.

The reading of Mr. Wenzell's address was received with applause. Then, after more music from the orchestra, Professor Wm. M. Searby, delivered the following valedictory:

VALEDICTORY.

Gentlemen of the Graduating Class: It is with a mingled feeling of pleasure and regret that I am called upon on behalf of my colleagues of the Faculty, to offer you our parting salutation as you take your leave of us, your tutors, and make a commencement for yourselves; no longer needing our direction in your studies, but able to go alone in practicing the art of Pharmacy, and in studying the collateral sciences on which this art is based. As we look back on the past three years during which we have been thus associated together, and remember your uniformly courteous bearing toward ourselves—as we call to mind your evident interest in the matters under consideration from time to time—as we remember how largely our labors have been lightened by your close attention and painstaking assiduity, we cannot but feel sorry that we are henceforth to lose your presence in our various classes. But this regret on our own account is more than counter-balanced by our gratification on yours, and so we find, as wiser men of all ages have found before us, that the satisfactions of life, when well spent, far exceed its annoyances; the sweet is more than the bitter; the pleasure outweighs the pain. And to-night, as we extend to you our benediction, and bid you go on your several ways rejoicing, we feel something of that confused emotion which led Juliet, looking down upon her beloved Romeo, and bidding him a sad, yet fond adieu, to exclaim—

“Parting is such sweet sorrow,
I could say ‘good night;’ till it be morrow?”

You are about to receive one of the compensations to which I have just referred. The distinction which the University confers upon you in granting to you the degree of *Graduate in Pharmacy* has cost you something. In order to obtain it you have had to forego many pleasures, many indulgences, many pastimes that are not only useful, but to a certain extent, necessary to our correct appreciation and enjoyment of life.

These self-denials are but a part of what *it costs* to excel in any profession. A positive and arduous application to your

studies is essential if you wish to attain anything beyond mediocrity. And we congratulate you that you have preferred to make these sacrifices in order to stand where you are to-night, rather than by indifference, or self-indulgence, or indolence, remain in ignorance of what you ought to know, while others outstrip you in the race for promotion. We believe, as you to-night look back on the sacrifices you have made to this end, that you feel amply compensated. We believe that while you may all have experienced with King Solomon that "Much study is a weariness to the flesh," yet you have no sympathy with him when he says, complainingly, "In much wisdom is much grief; and he that increaseth knowledge increaseth sorrow."

But if you feel a present reward for your past outlay of time and money and effort, let me remind you that this is but the *beginning* of that reward. All through life you will look back to this evening, and remember it with pleasure and with more or less of pride. And this, not so much because of your now **graduating**, as because of certain feelings of self-commendation which every man has when he is conscious of having made a good use of his time and opportunities.

But the rewards of science are not in her honors; they are in *herself*. That which will be to you in the years to come your chief compensation is not the satisfaction you may feel because you are a graduate, or because you can look back on your time in College having been well spent, or in any distinction you may attain in the future, but in *the knowledge itself*, which is at the bottom of all these. It will help you—nay, will be *essential*, to success in your calling. The time has gone by when an ignoramus can successfully "run" a Pharmacy, and the tendency of the age is toward greater efficiency on the part of those in charge of such establishments. The people *expect* more and more of them as time advances, and when the day shall come that your locks shall begin to whiten—as ours are doing—or the vacant spaces be found outside of your crania (may there never be any vacancies *within*!) the Pharmacist will be still more than now a man of science and of literary attainments, and he that is not will be behind the times, and fall short of the expectations of the community.

But, gentlemen, important as financial matters are to all of us, they constitute the smallest part of the compensation which knowledge yields. Let not your minds dwell too much on money; value this at its true worth. Do not despise it; but do not let it be *your all* in life. Look higher! See the "*big pay*" that science gives when she makes her *large* awards! See the treasures she has yet to bestow. See the interest and compound interest she pays in ever-increasing stores of knowledge; in the development of your mental powers; in the enlargement of your conceptions, and in the augmentation of all the forces that contribute to your own enjoyment, and that fit you for beneficent services to others. Woo her then! and she will tell you her secrets! Press your suit hard, and she will yield you her treasures! Remember, "faint heart never won fair lady," and this fairest of the fair—this "more precious than riches"—this "more to be desired than fine gold," is not to be won by any half-hearted suitors. But when she is once yours, what a prize you have! What satisfaction! What sweet companionship! What wise counsellings are yours! Yours now, and yours forever!

Gentlemen, you are about to receive your diplomas. Permit a word of caution to each of you with regard to that document: Do not suppose that, having a diploma, you have all you want, or that you know enough to carry you through life, or that your studies are ended. On the contrary, this is your "Commencement." Your diploma is evidence of your having had certain opportunities, certain experience—of having attended certain courses of instruction, and of your being now possessed of a certain amount of knowledge. It is this and nothing more. It shows that you are now fitted to *commence* your studies without the supervision of tutors. They have taught you the *methods* of study—how to set about your investigations. Do not suppose that you can now "rest on your laurels;" you must go on. "Progress" should be your watchword. I have known some persons to whom the possession of a diploma was a positive misfortune. They foolishly thought to obtain *that* was the object of their studies, and once possessed of that, all further advance was unnecessary. Had they had no diploma they

could have kept up their studies; once in possession of that, they threw their studies, where Shakespeare and some other people would have us throw our physic—"to the dogs," and where, I need hardly tell you, such people themselves sometimes speedily follow.

You will seek then, gentlemen, to keep up with the times; to know what others of your profession know. You will take care to be informed of the principal discoveries made from time to time in the vast domains of chemistry and of botany; you will keep "posted" as to new remedies added to our *Materia Medica*, and as to improved processes in Pharmacy. To do this even requires some considerable diligence, and the more so as you become deeply engaged in business. Let none of you think that you can, like Rip Van Winkle, go to sleep for a number of years, and waking up, find the pharmaceutical world just as it was when you left it—or rather when it left you. To hold your own—keep your place in the ranks, you must keep wide awake—you must advance.

But further, while keeping well informed as to what is going on in the world of pharmacy all around you, you will, I trust, add your quota toward the sum total of new discoveries which every year brings. There are thousands of matters coming before us continually, on which we need more information. Some of these I trust you will from time to time investigate. I am pleased to note that most of you have followed the example set by Mr. Heaney, our first graduate, in examining and analyzing our California productions. An abundance of plants and minerals, comparatively unknown in other parts of the world, invite investigation. Already *Eucalyptus*, *Oxytropus* and *Megarrhiza* have received attention at your hands. More will doubtless follow, as well as matters in the realms of chemistry and pharmacy, to which others of your number have contributed.

As graduates in Pharmacy, gentlemen, something is expected of you in another direction, viz.: That you will sustain the dignity of your profession—

1st. By a strictly moral and correct private life. He who disgraces himself by a departure from the path of moral rectitude, brings reproach on his associates.

2d. By avoiding quackery in every form, and discouraging it in others. We administer no Hippocratic oath (too often, alas! taken only to be broken,) but we appeal to your sense of honor, to let your example and your influence be on the right side in this matter.

3d. By abstaining from corruption in the buying of patronage. This is the greatest evil that afflicts our pharmaceutical commonwealth to-day. It is a question that will probably come before every one of you. If you are men of honor and integrity, you will set your faces squarely against it. *It is wrong*, and you will not defile yourselves by participating in it. If you are unprincipled, or vacillating, you will probably yield to the inducements you see on every hand to cause you to lower yourselves to the level of the disreputable pharmacists and physicians around you.

Gentlemen: Having received your diplomas, I trust that each of you will, all through life, prize it, and care for the College to which you are indebted for it. That you will strive to be worthy of your *Alma Mater*, to preserve her good name, and to promote her prosperity. It is to her graduates that she looks for her most bountiful endowments—I might almost say it is to her children that she looks for her future support. Let it be on your minds to contribute to her material stability, and to her moral powers as your circumstances and opportunities allow. Let her museum be the first to be thought of, as you meet with desirable specimens or new productions. Encourage others to go through her curriculum of studies, as you meet with young men of good parts and with sufficient general education to fit them for our profession; and, on the other hand, discourage the lazy, the ignorant, the stupid, the reckless, from following pharmacy, for they do no good to themselves, and bring discredit on the body at large. If our College is ever to stand high among its sisters in the land (and we believe it will) it will be because of the proficiency of its graduates, not because of their number.

Gentlemen, on behalf of the Faculty, I dismiss you to your several vocations in life, bearing with you our wishes for your future prosperity. And along with this prosperity we desire to see you advance with the times ; to see you acquit yourselves like men ; to see you GROW ; to see you make the most of yourselves and your opportunities. So will you prove that diligence, in the study of science, brings its own compensation, and that this "Commencement" is to each of you the *beginning of an honorable career.*

This address was listened to by the large audience with a stillness and attention worthy of the time and place, as well as gratifying to the speaker, and upon its close was met with long continued applause. After appropriate music, Prof. John Le Conte, M. D., of the University of California (President of the Faculty), bestowed, with a few well chosen remarks, the diplomas upon the following young gentlemen: Robert C. Meyers, Thomas D. Graham, Gaston E. Bacon, Adolph Kahn, F. P. McLean.

After a most felicitous valedictory address by Mr. Robert C. Meyers, the benediction was pronounced by the Rev. Mr. Rexford, and the large audience dispersed.

[Abstract from an Inaugural Essay.]

SESAME OIL;

AND

*Its adaptability as a Substitute for Olive and Almond Oils
in certain preparations of the Pharmacopœia.*

By ROBERT C. MEYERS, of San Francisco.

OLEUM SESAMI.—The fixed oil obtained by expression from the seeds of *Sesamum Indicum*, and *Sesamum Orientale*.

Sources.—The seeds are produced in India, Formosa, and the southern part of the United States, but the chief place of manufacture of the oil is at Marseilles, France.

Properties.—The oil at the ordinary temperature is a clear liquid, having a canary yellow color. It is without odor or taste. It has a specific gravity at a temperature of 62 degrees F. of 0.920. It is soluble in five volumes of stronger ether, and thirty-two volumes of boiling alcohol dissolve one of the oil. As the temperature of the oil is decreased it first becomes turbid, and when at a temperature of 23 degrees F. it solidifies. On heating the oil a peculiar and somewhat acrid odor is developed, which cannot be detected when the oil is cooled.

Sesame oil is used to adulterate olive and almond oils. According to Fluckiger and Hanbury, this adulteration is easily detected by “adding to the suspected oil a mixture of equal volumes of nitric and sulphuric acids, previously allowed to cool, when, if sesame oil be used as the adulterant, a greenish coloration will be given. As small an amount as five per cent. can be detected by this test.”

Sesame oil itself is liable to be adulterated by the addition of the cheaper oils, such as poppy seed, rape, cotton seed, etc.

etc. But these can be detected by the usual tests employed to ascertain their presence.

Chemical Composition.—According to Fluckiger and Hanbury, the oil is a mixture of Olein, Stearin and other compounds of glycerine, with acids of the fatty series.

The solid portion of the oil contains acids corresponding to Myristic, Palmitic and Stearic. The oil contains from seventy to seventy-five per cent. of Olein.

The oil also contains an extremely small quantity of a substance, perhaps a resinoid, which has never been isolated.

Sesame oil, although officially recognized in the secondary list of *Materia Medica* of the United States Pharmacopœia, is but seldom, if ever, used in pharmaceutical preparations. It is used to a great extent by manufacturers in the preparation of hair oils and pomades. Piesse, in his treatise on the Art of Perfumery, in speaking of the oil, says, "that without doubt, this is the finest fat oil which a perfumer could use. It is almost free from color, is tasteless and inodorous, it remains for an indefinite length of time free from rancidity, and some authors say it *never* becomes rancid. A sample which I have, placed in such a position that other oils would have been spoiled in a year, is still perfectly sweet, although nearly six years old."

Taking into consideration its official recognition, the reputation it possessed of not being very liable to rancidity, its comparative cheapness (of which I shall speak hereafter), and having at my command a quantity of pure sesame oil, I undertook to ascertain in how many of the pharmacopœia preparations it could advantageously replace olive oil. I divided the preparations into two groups. First. Those in which the oils are merely mixed with the other ingredients by the aid of resin, wax, spermaceti, etc. etc. Second. Preparations in which the ingredients are in chemical combination.

First Group.—I selected Ceratum Plumbi Subacetatis and Unguentum Aquæ Rosæ, as the preparations with which to ascertain whether sesame oil was adapted as a substitute for olive and almond oils, in the preparations comprising the first

group. The quantities taken were those ordered by the Pharmacopœia; the ingredients with the exception of the oils, for which sesame oil was substituted, were also those ordered by the above authority.

The result was, in the case of the unguent, a preparation having a white and creamy appearance, and up to this date showing no signs of rancidity, although having been prepared since the 14th of February, 1875. A sample of the unguent, here written of, is contained in the box marked, cold cream. I also exhibit a sample of the Ceratum Plumbi Subacetatis made with Sesame oil, in place of olive oil.

Preparations in which the Ingredients are Chemically Combined.—It is very well known that Linimentum Ammoniaë, when prepared according to the Pharmacopœia, is a preparation having a granular appearance, and possessing a semi-solid consistence which renders it a difficult matter to apply the liniment directly from the vial in which it may have been dispensed. The longer the time elapsing since its preparation the greater the difficulty in removing it from the bottle, until, in some cases, it becomes necessary to apply heat in order to liquify the almost solid liniment and thereby render it available for its intended use.

Taking the quantities of the ingredients ordered by the Pharmacopœia for the preparation of Linimentum Ammoniaë, but in place of the olive oil using sesame oil, we find, as a result, that we possess a preparation having a smooth appearance, resembling a well made emulsion, and having a consistence that will allow of its being poured from a vial having a very narrow neck. Time even seems to exert but little influence over its consistence. Accompanying this thesis are four samples of Linimentum Ammoniaë, two of which are prepared with olive oil, and two with sesame oil. Of these, one with olive oil and one with sesame oil, were prepared eight months since. The other two were prepared but a day or two ago. Upon comparison, you will perceive that but little difference exists as regards the state of fluidity of the specimens made with sesame oil; but on comparing the samples prepared with

olive oil, you will notice that while the sample lately prepared possesses some fluidity, that prepared for a longer period of time is almost solid, or I might more appropriately say, is of a gelatinous consistence.

In preparing Emplastrum Plumbi, I took four troy ounces of oxide of lead, seven troy ounces of sesame oil and a sufficient quantity of water, the quantities of oil and litharge being proportionately the same as those directed by the Pharmacopœia.

I first sifted through a very fine sieve the requisite quantity of litharge. I sifted the litharge in order that the combination would take less time and be more perfectly performed than if the litharge were allowed to remain in lumps. The litharge, oil, and water were placed in a vessel having a capacity equal to three times the bulk occupied by the ingredients, in order to allow space for the expansion of bulk of the ingredients, caused by the evolution of carbonic acid gas and steam. I allowed the ingredients to remain on the fire for two hours, constantly stirring, and adding from time to time a little water, as that first added became combined or vaporized. At the end of the above time the combination was completed, and the result was a mass equal in adhesiveness to the plaster made with olive oil, but of a softer consistence.

Taking under consideration that the percentage of olein contained in sesame oil was greater than that possessed by olive oil, and making an allowance of litharge therefor, I found, after a few trials, that by taking thirty-six troy ounces of oxide of lead and fifty-six troy ounces of sesame oil, as the quantities of the ingredients to be used, a plaster could be prepared having a consistence, adhesiveness and appearance equal to the plaster made with olive oil.

A sample of the plaster made as above stated, accompanies this thesis.

The non-liability of sesame oil to rancidity gives it a claim to the position occupied by olive and almond oils. But it possesses still another advantage which supports its claims to the place now occupied by those oils, and which although mentioned last, is, however, by no means, the least in importance. I refer to its comparative cheapness.

The usual price paid for genuine olive oil is three dollars and a half a gallon. The price paid for almond oil varies with the manner of purchase. The wholesale drug houses of this city sell it at sixty-five cents a pint. But should the purchaser himself import the oil from England in original packages the price would be but forty cents a pint. But even this sum will not bear comparison with the price of sesame oil, which can be purchased in this city for a dollar and seventy-five cents a gallon, in quantities to suit.

The samples which I present with this thesis will, I think, fully show the merits possessed by the oil.

[Abstract from an Inaugural Essay.]

OXYTROPIS CAMPESTRIS.

(Rattle Weed).

By THOMAS D. GRAHAM, of San Francisco.

About two years and a half ago, and several times since, the Press have had accounts of a plant that grows in California, which has a destructive effect on the herbivorous animals, when eaten by them. The desire to know what the deleterious principle is has prompted me to make a chemical examination of its constituents.

Botanical Description and History.—In the month of June a quantity of rattle weed was sent up from San Bernardino County. I took a part of it to Dr. Kellogg, of the Academy of Sciences, and he identified it as oxytropis campestris, a species of plant belonging to a suborder of the astragalacæ, natural order leguminosæ, pubescent or smoothish, calyx five-toothed, corolla usually long and narrow; standard narrow, equalling or exceeding the wings; the keel tipped with a sharp

projecting point or appendage; stamens diadelphous, stigma minute terminal, pod many seeded, ovate or oblong—lanceolate, of a thin or papery texture; pod often two-celled by the intrusion of the ventral suture; seed stalks slender; pinnate leaves of many leaflets, and naked scapes bearing a head or short spike of flowers. Flowers yellowish, cream-colored, or white, often tinged or tipped with purple or violet blue. It is a low nearly acaulescent perennial, with tufts of numerous very short stems from a hard and thick root or root-stalk.

It grows in California, the Rocky Mountains of Colorado and northward; in the White Mountains of Utah, in the northern part of Maine, and in the Humboldt mountains, near the Columbia River. It grows in the north of Scotland, and in the Swiss Alps. There are a large number of plants in the order, scattered all over the world, (vide King's U. S. Explorations of the 40th Parallel, Hooker's Flora Boreali Americana, Don's Dictionary, Gray.)

Local Account.—The rattle weed is called by the Spaniards, "loco," which simply means, crazy weed. Cattle and horses affected by eating it are said to be "loco." Horses in the southern counties have been seriously affected by eating it, several hundreds having died, in the fall of each year, at which time the plant is in perfection as regards its noxious qualities. Horses after eating it would become crazy, forsake the herd, and would wander off by themselves, paying no attention to their mate, or anything else. They seemed to lose all their natural instinct, as if they did not know enough to go for water, and many died of thirst. They seemed to retain their sight, and yet would not turn out of their way for anything, and would walk over the edge of a precipice. They seemed to be in a kind of stupor, and if touched with the hand, would break into spasmodic jumps.

Examination of the Plant.—The plant being partly dry, when received, the actual amount of moisture could not be ascertained, but, on drying it afterwards, it lost 25 per cent. of its weight, when received. It had a strong odor decidedly herbaceous.

Treatment with Ether.—The herb was reduced to a moderately fine powder, moistened with ether, and packed in a percolator, and ether, specific gravity .750, passed through until exhausted. The ethereal solution was of a dark greenish brown color. This was evaporated spontaneously, until a black, soft resinous extract was left. Boiled the resin with water, filtered, and treated the filtrate with ferric chloride, it gave a dark discoloration, which was not the case when treated with a ferrous salt. The dark precipitate showing the presence of tannin. The filtrate gave an acid reaction, with blue litmus paper. The ethereal resin is composed of two resins, one, brownish green, soluble in alcohol, the other, blackish green, soluble in ether and boiling alcohol.

Treatment with Alcohol.—The herb was packed in a percolator, and packed very tightly, and alcohol, specific gravity .835, poured on. The alcoholic tincture was of a beautiful dark green color, with a slight tinge of brown. When a portion was added to a large quantity of water it gave a slight turbidity, hardly perceptible, the mixture being transparent and of a beautiful green color. Acids destroyed the green color, precipitating the resin, turning the mixture to an ashy brown. Alkalies had no effect on the green color whatever. Hydrate of alumina precipitated the green matter, which was soluble in ether. Added a strong solution of tartaric acid, filtering, adding bicarbonate of potassium to saturation, filtering, and shaking the filtrate with ether; drew off the ethereal solution with a pipette, let it evaporate spontaneously. The residue which was left was of a brown color, containing some resin and an organic principle, but no alkaloid. Took another quantity of the tincture, diluted it with twice its volume of water, added tannic acid as long as a precipitate was thrown down. The tannic acid precipitated the resin, which was removed by filtering the solution; neutralized the acid solution with bicarbonate of potassium, filtered, and washed with distilled water; mixed the moist precipitate with litharge, and evaporated to dryness; digested this with boiling alcohol, filtered, digesting twice more with boiling alcohol, and filtering; mixed the alcoholic solution and evaporated over a water bath. It left a very thin pellicle

in the capsule. It was insoluble in water, but soluble in alcohol. Acetate of lead produced a precipitate with it, but neither tannic acid nor H Cl had any effect on it. I tried in this manner to get a glucoside, but did not find one.

The resin is soluble in turpentine, the liquor ammoniæ, aqua ammoniæ, alcohol and ether, burning with a bright, white light, without much smoke.

Treatment with Water.—The aqueous infusion contained gum, albumen, and glucose; starch was not present in the decoction.

Treatment of the Ash.—Incinerated a portion of the herb, boiling the ash with water, filtered, treated a portion with H Cl, when it effervesced briskly. The ash contains potass in the state of carbonate.

I regret that I have had to stop all farther investigation through the lack of material, having done all in my power to obtain more, but failed to get it.

Remarks.—Not having been able to isolate the alkaloid, which the plant contains, on account of its small percentage, and the small quantity of material that I had to work on, the examination is in an unfinished state, and as the subject is so interesting, and the result of a successful analysis might be the means of doing something toward saving the lives of hundreds or thousands of animals, I am sufficiently interested to continue my examination when the plant arrives at maturity again, which will be in the month of May or June. The plant seems to flower earlier in the southern than the northern counties, flowering even in the month of May. It is strange that in other states, and in Europe, where this plant grows, that we have not heard of its deleterious properties, either in this plant, or any of its species. Perhaps it is, that owing to the dried up state of the grazing grounds, in the latter part of summer, on this coast, the animals prefer the juicy succulent oxytropis and others of its class, in preference to the dry withered grass, and when once they eat it they seem to like the plant, for they continue eating it. It affects them more like a

continued intoxication—in fact I think the effect is somewhat similar to the symptoms produced by the continued use of *artemisia absinthium*. The plant is well worth farther investigation, and I hope that success in making a full analysis may crown my continued efforts, or those of other students who take any interest in the *Oxytropis Campestris*.

SAN FRANCISCO, *Sept.* 20, 1875.

M E M B E R S
OF THE
SAN FRANCISCO BOARD OF PHARMACY.

JOHN CALVERT, President.
WM. T. WENZELL, Secretary.
MAX TSCHIRNER,
JAS. H. WIDBER,
A. F. COLMAN.

REPORT OF THE SECRETARY
OF THE
BOARD OF PHARMACY

READ BEFORE THE SEVENTH ANNUAL MEETING
OF THE CALIFORNIA PHARMACEUTICAL
SOCIETY, OCTOBER 13TH, 1875.

To the President, Board of Directors and members of the California Pharmaceutical Society:

GENTLEMEN: The duties of the undersigned, in connection with the Board of Pharmacy, as Secretary, date from May 1st, 1874.

The appended report will therefore also commence at the specified time, ending with the 31st of October, in order to get in a full report, up to the present time. Owing to the low state of the funds, at the time when your Secretary assumed the duties of his office, it was the expressed wish of the members composing the Board to perform their various duties without remuneration, and also to conduct all business pertaining to it with the utmost economy.

Trusting that the Board have succeeded in carrying out this laudable intention to the satisfaction of the Society, and thereby enabled to show up a financially flourishing condition, the Board of Pharmacy would respectfully submit the following reports:

RECEIPTS.

From Registration and Licentiate Certificates..... \$322 50

EXPENDITURES.

January 3, E. Haight, for Auditing the Accounts of the late Secretary	\$10 00	
January 7, Advertising in Chronicle.....	3 75	
“ 8, “ “ Morning Call.....	2 50	
“ 8, “ “ Bulletin	3 00	
February 2, Envelopes and Stamps.....	2 50	
March 25, Stamps.....	1 00	
May 13, Inscribing Names on 3 Certificates.....	1 50	
“ 18, File for Registration Blanks.....	1 00	
June 5, Inscribing Names on 2 Certificates.....	1 00	
October 17, “ “ 4 “	2 00	
“ 28, “ “ 4 “	2 00	
		30 25
Cash Paid to Treasurer.....		292 25
		235 25
Balance in the hands of the Secretary.....	\$	57 00

REPORT OF REGISTRATIONS.

There were registered from May 1st, 1874, to October 31st, 1875, two hundred and seventeen names, of which one hundred and twenty-three were registered as Pharmacists and ninety-four as Assistant Pharmacists.

List of Assistant Pharmacists who did not renew their registration as required by law, by reason of leaving the city, or finding other means of employment:—

Geo. Gleim, John Hug, Wm. H. O'Keefe, Chas. C. Smith, G. W. Oakes, W. Biter, Fred. Callanden, John Koenig, E. A. Steiner, Eugene G. Wood, Henry Eidenmueller, T. F. Rossman, E. A. Richards, Alfred Dean.

List of Pharmacists who have retired from business:—

Ed. Neumann, C. F. Miller, Geo. H. Clapp, Geo. H. Fowler, Allen Dixon.

List of stores opened:—

F. H. Vonder Lieth, cor. Sixth and Folsom streets.

L. Hilmer & Co., cor. Nineteenth and Mission.

M. H. Fowler, cor. Sixth and Harrison.

J. Y. Buchanan, cor. Post and Mason.

F. Euphrat, cor. Montgomery Av. and Kearny street.

List of stores discontinued :—

J. Y. Buchanan, cor. Post and Mason.
F. Euphrat, cor. Montgomery Av. and Kearny street.

List of locations of stores changed :—

Adolph Lessel, to cor. Greenwich and Powell.
E. Abramson, to 717 Clay.
H. B. Holbrook, to cor. Eleventh and Folsom.
O. W. Luedinghausen, to 510 Hayes.

Change in proprietorship of stores :—

Ed. Abramson, 753 Clay, to Abramson & Bacon, 717 Clay.
J. G. Rider, 1002 Stockton, to Donald McDonald.
Geo. H. Clapp, 1144 Market, to Geo. H. Fowler.
Geo. H. Fowler, 1144 Market, to J. A. Roeder.
B. Lefevre & Co., cor. Sixth and Market, to Jas. McDonnell.
E. J. Pring, cor. Fourth and Howard, to Painter & Calvert.
J. W. Moffit & Co., 413 Kearny, to S. A. Stobie & Co.
Allen Dixon, cor. Twenty-second and Mission, to R. R. Hay.
Ed. Newmann, 20 Post, to—.

List of newly registered Assistant Pharmacists :—

Of the ninety-four Assistant Pharmacists sixty-eight were re-registered ; the remaining twenty-six names were all newly registered ; as follows :—

A. B. Cooke, Geo. Harris, Jas. Nicholson, Jas. Laughlin, Clemens Eshmann, N. W. Shaw, Paul Desmarais, John Hunter, Frank Clarke, C. B. Chapman, O. M. Robinson, S. E. Burroughs, Geo. W. Westbrook, E. M. Kleyer, John Tanner, Thos. O. Drinkall, E. W. Maglone, Fred. Hulting, E. H. Hiscocks, John L. Gleason, Donald McDonald, Wm. L. Basford, M. H. Fowler, Wm. Chas. Markham, R. R. Hay, E. W. Joy.

List of newly registered Pharmacists.

Of the one hundred and twenty-three registered Pharmacists seventeen were newly registered ; as follows :—

PROPRIETORS.	PLACE OF BUSINESS.	No. of Ass'ts.
Clinton, C. A.....	South San Francisco.....	1.....
Curtis, Jas. & Co.....	Cor. Market and Stewart Streets.....	1.....
Coffin & Mayhew.....	Cor. 16th and Valencia Streets.....	1.....
".....	Cor. 21-st and Howard Streets.....	1.....
Drossel, J. H.....	Cor. Geary and Dupont Streets.....	1.....
Dwyer, Joseph.....	No. 219 Pacific Street.....	1.....
Edwards, T. M.....	Cor. Kearny and Jackson Streets.....	1.....
Essel, Adolph.....	Cor. Filbert and Powell Streets.....	1.....
Evans, A.....	No. 229 Hayes Street.....	1.....
Flynn, P. R.....	No. 722 Montgomery Street.....	1.....
Fowler, M. H.....	Cor. 6th and Harrison Streets.....	1.....
Gates, Jas. H.....	Cor. Howard and New Montgomery-av.....	1.....
Gates, Jas. R.....	Cor. Sansome and Commercial Streets.....	1.....
Gros, A.....	Cor. Kearney and Washington Streets.....	1.....
Gerichten, P.....	No. 533 Commercial Street.....	1.....
Hassenpflug, F.....	No. 1444 Dupont Street.....	1.....
Hilmer, Louis.....	Cor. Geary and Larkin Streets.....	1.....
Hilmer & Co.....	Cor. 19th and Mission Streets.....	1.....
Hay, R. R.....	Cor. 22d and Mission Streets.....	1.....
Hohlweg, F.....	Cor. Polk and Jackson Streets.....	1.....
Huie, Geo. W.....	Cor. 11th and Mission Streets.....	1.....
Holbrook, C. B.....	Cor. 11th and Folsom Streets.....	1.....
Horne, C. W.....	Cor. Sutter and Hyde Streets.....	1.....
Judson, H. H.....	Cor. Ellis and Stockton Streets.....	1.....
Kurtz, A. M.....	Cor. Turk and Hyde Streets.....	1.....
Kendall, C. B.....	Cor. Hayes St. and Van Ness Avenue.....	1.....
Kelly, Terrence B.....	No. 216 Pacific Street.....	1.....
".....	No. 503 Davis Street.....	1.....
Kearney, P. A.....	Cor. 1st and Folsom Streets.....	1.....
Kohler, Wm.....	Cor. Eddy and Taylor Streets.....	1.....
Lanzweert, Louis.....	No. 406 4th Street.....	1.....
Lengfeld, A. L.....	Cor. Geary and Stockton Street.....	1.....
Lefevre, B.....	Cor. Washington and Dupont Streets.....	1.....
Leudinghausen O. W.....	No. — Hayes Street.....	1.....
Leipnitz & Tschirner.....	No. 419 Bush Street.....	1.....
McDonnell, Jas.....	Cor. 6th and Market Streets.....	1.....
Moody, Jno. C. & Co.....	No. 214 Kearny Street.....	1.....
McDonald, Donald.....	No. 1002 Stockton Street.....	1.....
McBoyle, A.....	No. 514 Washington Street.....	1.....
Mervy, Alphonse.....	Cor. Green St. and Montgomery Av.....	1.....
Mayhew, Wm. E.....	No. 144 4th Street.....	1.....
".....	Cor. 4th and Harrison Streets.....	1.....
".....	Cor. Stockton and Pacific Streets.....	1.....
Miller, Wm. C.....	No. 1125 Dupont Street.....	1.....
Mentz, Chas. H.....	Cor. 12th and Howard Streets.....	1.....
Nola, Leoude.....	Cor. Union and Powell Streets.....	1.....
Newmark, Valentine.....	Cor. Kearny and Clay Streets.....	1.....
Painter & Calvert.....	Cor. 4th and Howard Streets.....	1.....
".....	Cor. Broadway and Stockton Streets.....	1.....
Pickering, Wm.....	No. 1114 Folsom Street.....	1.....
Petibean, E.....	Cor. Wash'ton St. and Brenham Place.....	1.....
Piquet, E. F.....	No. 1144 Market Street.....	1.....
Roeder, J. A.....	Cor. Dupont and Pacific Streets.....	1.....
Roturier & Zabaldano.....	Cor. 3d and Bryant Streets.....	1.....
Roethe, C.....	Cor. 3d and Folsom Streets.....	1.....
Rule, J. W.....	No. 504 Bush Street.....	1.....
Rider, F. G.....	S. E. Cor. 3d and Folsom Streets.....	1.....
Rottanzi, A.....		

PROPRIETORS.	PLACE OF BUSINESS.	No. of Assists
Stobie, S. A. & Co.....	No. 413 Kearny Street.....	1....
Searby, Wm. M.....	Cor. 5th and Folsom Streets.....	1....
Simpson, Wm.....	No. 609 Davis Street.....	1....
Steele, Jas. G. & Co.....	No. 521 Montgomery Street.....	2....
Shaw, H. B.....	Cor. Sutter and Powell Streets.....	1....
Steylaars, C. L.....	Cor. Dupont St. and Montgomery Av..	1....
Szarvash, S. F.....	No. 1329 Dupont Street.....	1....
Schmidt, H. W. & Bro.....	Cor. Sacramento and Kearny Streets....	1....
Trouette, H.....	No. 304 4th Street.....	1....
Vonder Lieth F. H.....	Cor. Powell and Broadway Streets.....	1....
“ “ “ “.....	Cor. 6th and Folsom Streets.....	1....
Wenzell, Wm. T.....	No. 852 Market Street.....	1....
Wilhelm, C. L.....	Cor. 6th and Mission Streets.....	1....
Wood, Wm. H.....	Cor. 2d and Mission Streets.....	1....
Wakelee, H. P.....	Cor. Bush and Montgomery Streets....	7....
Ward, D. W.....	Cor. Pine and Polk Streets.....	1....
Widber, J. H.....	Cor. Market and 3d Streets.....	2....
Young, Joseph.....	No. 1116 Folsom Street.....	1....
Zelner, Wm.....	Cor. 5th and Mission Streets.....	1....
Zeile, Chas.....	No. 528 Pacific Street.....	1....

Total number of Drug Stores in the City and County of San Francisco.....92

Before concluding this report it is not unimportant to direct your attention to a certain degree of apathy, frequently manifested, on the part of some apothecaries of this city who have occasion to employ help, to keep the registration of their assistants.

It is a common occurrence, that assistants enter drug stores as employees without previous registration, or without their employers demanding their registration papers before concluding permanent engagements.

It being the duty of the Secretary of the Board to examine into the status of every assistant presenting himself for registration, it is plain that, according to the provisions of the act, under which an assistant is registered, that he is not only legally bound to produce testimonials of qualification, but, also, that he must have a certain number of years of experience in a store, where prescriptions of medical practitioners are compounded. Therefore, registration of assistants also implies competency, obtained by actual counter experience. The intent of the law is evident; it is to furnish pharmacists with

assistants possessing a fair degree of knowledge pertaining to our profession; and this being the purpose, should not the individual interests of each and every apothecary who employs or may have occasion to employ assistants, then demand the support and maintenance of such a law?

Another source of annoyance is the almost universal disregard of registered persons of notifying the Secretary of changes, whether in the location of places of business, or changes in engagement of assistants. It is high time that this irregularity, which is a fruitful cause of trouble to the Secretary of the Board, be abated; for it is impossible, under these circumstances, to maintain an accurate registration list.

In order to direct the attention of persons concerned in these matters to the fact, that by their non-compliance to legal enactments, they will render themselves liable to certain penalties, the following extracts from the Pharmacy Act are submitted:

Section V: It shall be the duty of every person registered
* * * “upon changing his place of business or engagement” to notify the Secretary within thirty days.

Section IX. Any registered person who shall permit the compounding and dispensing of prescriptions of medical practitioners in his store by persons not registered—or any person who shall fail to comply with the regulations of this act—shall for every such offence be deemed guilty of a misdemeanor, and on conviction thereof be fined fifty dollars.

Respectfully submitted.

WM. T. WENZELL,
Secretary of Board of Pharmacy.

PROSPECTUS

OF THE

California College of Pharmacy.

INCORPORATED, AUGUST 7, 1872.

DEPARTMENT OF PHARMACY,

UNIVERSITY OF CALIFORNIA.

FOURTH ANNUAL SESSION, 1876.

COMMENCING MARCH 2D.

The CALIFORNIA COLLEGE OF PHARMACY being affiliated with the UNIVERSITY OF CALIFORNIA, forms one of the TECHNICAL SCHOOLS contemplated by the framers of the "Organic Act" of the University, each of which is designed to be separate and distinct as regards its peculiar sphere and the work appertaining thereto, but connected by a tie similar to that uniting the States of the Union, occupying in relation to one another distinct and independent positions, yet connected through the general government of the University.

According to the conditions of the agreement, the management of the DEPARTMENT OF PHARMACY rests with those best qualified to judge of its requirements, *i. e.*, *practical* pharmacists, to whom, also, is entrusted the responsible task of providing capable and practicable persons as instructors. It will be seen upon reference to the form of agreement, that the position of our school as a COLLEGE OF PHARMACY, is maintained in every respect.

Extract from the "Organic Act" of the University of California :

"SECTION 8. The Board of Regents may affiliate with the University, and make an integral part of the same, and incorporate therewith any incorporated college of medicine, or of law, or other special course of instruction now existing or which may hereafter be created, upon such terms as to the respective corporations may be deemed expedient, and such college or colleges thus affiliated, shall retain the control of their own property, with their own Board of Trustees, and their own Faculties and Presidents of the same, respectively, and the students of those colleges, recommended by the respective Faculties thereof, shall receive from the University, the degrees of those colleges, *provided*, however, that the President of the University shall be, *ex-officio*, a member of the Faculty of each and every college of the University, and President of such Faculty."

Extract from the "Organic Act" of the University of California :

"SEC. 18. The immediate government and discipline of the several colleges, shall be entrusted to their separate Faculties and the resident professors of the same, each of which shall have its own organization, regulate the affairs of its own college, etc., etc." * * * * *

AGREEMENT.

"In accordance with the Organic Act of the University of California, the California College of Pharmacy is hereby affiliated with the University, upon the following basis :

"The College will maintain its own Board of Trustees, and will continue to hold its own property as if this affiliation had not been agreed upon.

"The College will also appoint its own professors and establish its own course of instruction, subject to the general approbation of the Regents of the University.

"The University will confer the degree of Graduate in Pharmacy, upon candidates recommended by the Board of Examiners of the College, and approved by a committee to be designated by the Regents.

"This agreement may be canceled by mutual consent, at any time, or by the withdrawal of either party to it, after twelve months' notice to the other party."

COLLEGE OF PHARMACY.

The California College of Pharmacy has entered on the fourth year of its existence, and the Trustees have to congratulate the members and students on the progress which has been made during the past session.

The reports of the officers show that the institution is in a very satisfactory condition. The several chairs of instruction are filled by able, practical men, with ample experience in the different departments over which they preside.

The class of 1875 consisted of thirty-nine students. The attendance was good, and the interest manifested was creditable to the students, as well as gratifying to the Professors.

In presenting this Circular to the Pharmacists of the Pacific Coast, the Board of Trustees would remind them that Pharmaceutical education is a matter in which they are all interested. The future status of our body depends on the success which attends our present efforts. The public sentiment of to-day demands a higher degree of proficiency in our calling than is found in the generality of our drug stores. To command the respect and confidence of the community, our young men must qualify themselves for the position they assume to fill; and the Trustees appeal to the Apothecaries of the Pacific States to give their countenance and good will to the College, which is now providing facilities for our young men to acquire a theoretical and practical knowledge of our profession. And they further urge upon all who can make the necessary arrangements, to afford their clerks and apprentices an opportunity of attending

the Lectures, as well as a short time each day for study. The Trustees believe that employers will, in most cases, be amply compensated for the small sacrifice thus made, by the increased efficiency and devotedness of their employes.

As yet, no rule for a preliminary examination (before matriculation) has been adopted by the College, but as the time is not distant when pharmaceutical examinations will be the rule, the Trustees would urge on Pharmacists the desirability of taking for apprentices such youths only as have had the advantage of a liberal education. If a knowledge of the elements of Latin have not been acquired, the candidate should lose no time in making himself sufficiently familiar with that language to enable him to read prescriptions and pharmacopœias.

And the Trustees further wish it to be made known that the students cannot reap the full benefit of the lectures, nor acquit themselves creditably at the examinations of this College without such necessary education.

Legislative enactments relating to Pharmacy have been in force for several years in the cities of New York, Philadelphia, Baltimore, Boston, St. Louis and San Francisco, which compel all persons commencing business to show that they are properly qualified.

The College is now permanently located in Toland Hall, a fine building belonging to the University of California. The accommodations, consisting of Lecture-room, Laboratory, Library and Museum, are abundant for our present wants, and well adapted to the purposes of the College.

The plan of instruction for the coming session will embrace the branches of Chemistry, Pharmacy, Botany and Materia Medica. It is the design of the Trustees to furnish such a course as will give the students a knowledge of the general principles of the sciences taught, and show their special and practical application to pharmaceutical requirements.

The professors will assist the students in their studies by occasional reviews of the ground gone over, thus giving opportunity for the corrections of misapprehensions and erroneous

conclusions, and stimulating them to exertion by setting up a generous emulation. The experience of the past has shown that in this way the interest of the students is greatly increased, and many of their difficulties are removed.

LECTURE TERM.

The regular term of 1876 will commence on Tuesday, March 14th, and terminate in September of the same year. In order that students may derive full benefit from the lectures, they should be present at the opening of the session.

The lectures will be given on *Tuesday* and *Friday* evenings of each week, at Toland Hall, Stockton street, between Chestnut and Francisco streets.

CHEMISTRY.

The lectures will be delivered on Friday of each week at 7.30 P. M.

This course will present a systematic study of theoretical chemistry, according to the latest views of chemical philosophers.

Physics will be dwelt upon sufficiently for the illustration of the general properties of matter—the forces of gravitation, adhesion, and cohesion.

Caloric in its relation to chemistry will be treated of.

This will be followed by the laws of chemical affinity, the electro-chemical theory, symbols, nomenclature, and the laws of chemical combination. The molecular theory and the principles of crystallography will be fully illustrated, the former by graphic symbols and diagrams, the latter by models.

A full and concise course of the chemistry of the non-metallic and metallic bodies is next taken up, comprising the more important elements, and those of special interest to the pharmaceutical student.

The course to conclude with organic chemistry, in which the chemistry of the alcohols, ethers, organic acids, sugars, glucose, gums, starch, glucosides, alkaloids, &c. will receive their due share of attention.

MATERIA MEDICA.

The lectures will be delivered on Tuesday of each week at 8.30 P. M.

The lectures on Materia Medica are devoted to those substances, chiefly of vegetable origin, which are used in medicine, and which are included under the general designation of *drugs*.

These articles are treated of in a systematic manner, notice being taken of the sources from which they are derived, their natural and commercial history, principal constituents and remedial qualities. The ordinary and toxical doses, with antidotes to the latter, receive careful consideration.

The students are instructed as to the proper time for collecting the various vegetable products, as well as the best modes of preserving them. Attention is called to their physical properties as met with in trade, and to the leading characteristics of each drug. Substitutions, adulterations, and natural impurities, with the methods of detecting the same, are duly considered, as also the distinguishing features observed in articles of superior and inferior quality.

PHARMACY.

The lectures will be delivered on Tuesday of each week at 7.30 P. M.

The principal subjects are as follows: Weights and measures of the U. S. and British Pharmacopœias and the metrical system. Specific gravity, thermometers, drug powdering, sifting, solution, filtration, maceration, percolation, re-percolation, evaporation, distillation.

The Galenical and Chemical preparations of the U. S. Pharmacopœia. Extemporaneous pharmacy, including construction of formulas, the art of combining medicinal agents, pills, mixtures, ointments, suppositories, plasters, etc.

BOTANY.

Friday evening of each week at 8.30 P. M. at Toland Hall, and on Monday of each week at 1 P. M. at the hall of Academy

of Sciences. The lectures include structural, functional, and systematic botany, and geography of plants. Excursions are made into the country on alternate weeks during the session, for the purpose of collecting and studying indigenous plants, under the direction of the Professor.

CONDITIONS OF GRADUATION.

1. The candidate must be of good moral character, and have attained the age of twenty-one years.

2. He must have attended two full courses of the lectures given by this College, or one of those given by some other College of Pharmacy whose conditions of graduation are based upon the like term of service, and the final course in this college.

3. Written evidence of the four years' service required by the Constitution, must be deposited with the Secretary of the College upon applying for examination.

4. He shall at the same time deposit with the same officer, an original dissertation upon some article of the *Materia Medica*, some Pharmaceutical Process, or the details of an analysis of some chemical substance which must have been performed by himself. This manuscript must be in his own handwriting, and be executed in a neat and legible manner.

5. He must be recommended jointly by the Professors and the Examining Board.

6. Such recommendation must be approved by the Board of Trustees.

7. Examinations shall only take place at the close of each course.

FEES.

Lecture Ticket (for the season).....	\$50 00
Matriculation Tickets (paid only once).....	2 50
Diploma Fee.....	10 00

The matriculation and lecture tickets must be obtained of the Secretary at the beginning of the session.

Members and graduates of the College, and students who have attended two sessions in the college, are admitted free to the lectures.

Medical students, or others not intending to pursue pharmacy as their vocation, will be admitted to the lectures, or any one of the courses they may desire to attend, by paying the matriculation fee, and that of the chair or chairs of instruction, and such students will enjoy the same advantages as regular students of pharmacy, except that they will not be eligible to the degree of Graduate in Pharmacy.

CLERKS AND STUDENTS.

Drug clerks and students on coming to the city, and those out of employment here, who are desirous of obtaining situations, may call upon the Secretary and register their names.

Young men coming to the city to attend lectures, should bear in mind that they cannot expect to receive much compensation whilst attending lectures and learning the business.

Pharmacists in want of assistants are informed that they can consult the list of applicants for situations, and are requested to notify the Secretary when vacancies occur in their establishments.

Any further information may be obtained by addressing

EMLÉN PAINTER,

*Sec'y Cal. College of Pharmacy, S. E. cor.
Clay and Kearny Streets, San Francisco.*

LIST OF QUESTIONS

SUBMITTED TO

CANDIDATES FOR EXAMINATION

FOR DEGREE OF

GRADUATE IN PHARMACY

BY THE EXAMINING BOARD

CALIFORNIA COLLEGE OF PHARMACY,

SEPTEMBER, 1875.

LIST OF QUESTIONS

CHEMISTRY.

1. Give reaction in equation when iron is allowed to act upon :

Dilute $\left\{ \begin{array}{l} \text{Sulphuric Acid,} \\ \text{Hydro-chloric Acid,} \\ \text{Nitric Acid.} \end{array} \right.$

2. Give the formulas and names of compounds of Chlorine with Agⁱ Cuⁱⁱ Sbⁱⁱⁱ Biⁱⁱⁱ Sn^{iv} P^v Fe₂^{vi}

3. Finish the following equations, and explain reaction for each, in writing.

- | | |
|--|---|
| 1. $\text{Na Cl} + \text{H}_2 \text{SO}_4 =$ | 6. $\text{Fe S} + \text{H}_2 \text{SO}_4 =$ |
| 2. $\text{Zn} + \text{H}_2 \text{SO}_4 =$ | 7. $(\text{NH}_4)_2 \text{SO}_4 + \text{CaO} =$ |
| 3. $\text{Cu SO}_4 + \text{Zn} =$ | 8. $2 \text{H}_2 \text{Ca O}_2 + \text{Cl}_4 =$ |
| 4. $\text{H}_g \text{Cl}_2 + 4 \text{KI} =$ | 9. $\text{Na NO}_3 + \text{H}_2 \text{SO}_4 =$ |
| 5. $\text{MnO}_2 + 4 \text{H Cl} =$ | 10. $\text{P}_2 \text{O}_5 + 3 \text{H}_2 \text{O} =$ |

4. Write formulas for the following compounds:

Ferric Chloride,	Sulphuric Anhydride,
Sodium Sulphate,	Nitric Anhydride,
Silver Nitrate,	Hydro-di Sodium Phosphate,
Ammon. Chloride,	Arsenic Anhydride,
Hydrocyanic Acid,	Platinic Chloride,
Potassium Chlorate,	Ammonium Acetate.

5. What volume in litres, at normal pressure, does 0.525 gramme of hydrogen gas occupy at 0° C? At 15° C? And at 100° C?

WM. T. WENZELL,
Professor of Chemistry.

MATERIA MEDICA.

1. Where and by what plant is Rhubarb produced? Describe its principal structural characteristics when of good quality, and state how an admixture of Turmeric may be detected in its powder.

2. What plant yields *Digitalis*? What is the proper time for collecting it? Mention its principal chemical constituents, also the official preparations, with the strength and dose of each.

3. What is Calabar bean? Give the name and natural order of the plant producing it, its place of growth, most active constituent, and state the ordinary dose of the solid extract. What are its medical properties?

4. Enumerate the Solanaceous plants that yield official substances, stating in each case the part employed; also the medical properties, and most important chemical constituent of each drug.

5. What is Ergot? Describe its production. Give its principal chemical constituents, and state to which it owes its medical effects.

W. M. SEARBY,

Professor of Materia Medica.

PHARMACY.

1. Describe the weights and measures called "Apothecaries," "Avoirdupois" and "Metrical"; and state upon what basis the latter are formed.

2. What is Alcohol? How is it produced, and what are the strengths of it used in the U. S. P. processes?

3. Give a description of the methods employed for exhausting vegetable substances of their soluble constituents for the preparation of extracts, fluid extracts, tinctures, infusions and decoctions.

4. Describe the processes of making Tartar Emetic, beginning with Sb_2S_3 .

5. Describe the process for making the varieties of Ammoniated Mercury; describe their constitution and give equations.

JOHN CALVERT,
Professor of Pharmacy.

BOTANY.

1. Give one or several classes of the Linnaean system, that coincide with families of the natural system.

2. What is the difference between a true root, a bulb and a rhizome?

3. Describe decassate leaves (*foliæ decassatæ*.)

4. Tell the difference between *Caryopsis* and *Achaenium*.

5. Tell one of the differences in the structure between *Belladonna* and *Hyoscyamus*.

HERMANN BEHR,
Professor of Botany.

QUESTIONS BY COMMITTEE.

1. Give a test for Mercuric Chloride in Mercurous Chloride.

2. Give an instance of single elective affinity. One of double decomposition.

3. Describe the *Cinchona Calisaya*, its habitat, mode of collection of the bark and general characteristics.

4. What alkaloids are contained in *Calisaya* bark, and what percentage of *Quinia*?

5. What per cent. of *Morphine* should a sample of *Opium* of approved quality contain?

A. M. KURTZ,
F. A. COLMAN,
Examining Committee.

LIST OF GRADUATES
OF THE
COLLEGE OF PHARMACY.

1874.

MR. J. P. HEANY.....Thesis, "Oreodaphne Californica."

1875.

MR. ROBT. C. MEYERS....."Sesame Oil and its Uses."

MR. THOMAS D. GRAHAM....."Oxytropis Campestris."

MR. GASTON E. BACON... "Various Analyses of Tincture of Opium."

MR. ADOLPH J. KAHN "Pharmaceutical Education."

MR. F. P. McLEAN..... "Analysis of Magnesites."

CLASS OF 1876.

NAME.	NATIVITY.	PRECEPTOR.
Bacon, Gaston E.....	Paris, France.....	Painter & Calvert.....
Bauer, F. C.....	San Francisco.....	J. A. Bauer.....
Bittenbender, G. W.....	Easton, Pa.....	Student Med. Dep't.....
Connolly, J. J.....	Cork, Ireland.....	Student Med. Dep't.....
Ebert, R. G.....	New York.....	Student Med. Dep't.....
Evans, Thos. A.....	Bristol, Eng.....	A. Evans.....
Goldman, B.....	Bavaria.....	
Graham, T. D.....	Liverpool, Eng.....	G. G. Burnett.....
Guillemard, A.....	San Francisco.....	
Hamilton, J. T.....	Steubenville, Ill.....	Student Med. Dep't.....
Harris, H. R.....	Santa Clara.....	J. W. Angell.....
Heineman, J. M.....	San Francisco.....	Student Med. Dep't.....
Hopkins, Morris.....		Chas. Langley & Co.....
Howell, Joseph.....	New York.....	Chas. Langley & Co.....
Kahn, Adolph.....	Brooklyn N. Y.....	A. Gros.....
Lindenberger, W. H.....	Louisville, Ky.....	Student Med. Dep't.....
Mervey, Emile.....	San Francisco.....	A. Mervey.....
Meyer, F. H.....	Baden.....	P. Greichten.....
Meyers, Robt. C.....	New York.....	V. Newmark.....
McCormack, H. T.....	Elgin, Ill.....	Student Med. Dep't.....
McLean, F. P.....	Lebanon, N. H.....	
Miller, J. A.....	Milwaukee.....	Student Med. Dep't.....
Minor, John F.....	New York.....	Student Med. Dep't.....
Mitchell, F. D.....	Addison, N. Y.....	Student Med. Dep't.....
O'Neil, L. P.....	San Francisco.....	Student Med. Dep't.....
Palmer, S. A.....	Erie County, N. Y.....	A. I. Lengfield.....
Pescia, Joseph.....	Cornia, Italy.....	Student Med. Dep't.....
Price, W. E.....	Kingston, Conn.....	
Ralph, J. D.....	Hannibal, Mo.....	J. W. Moffitt.....
Ray, F. E.....	Sacramento.....	A. M. Kurtz.....
Robinson, Oscar.....	Dover, Me.....	W. M. Searby.....
Rogers, Nathan.....	San Francisco.....	W. T. Wenzell.....
Severio, Frank.....	New York.....	W. E. Mayhew.....
Sichel, Gustave.....	New York.....	Student Med. Dep't.....
Simon, J. A.....	Paris, France.....	Student Med. Dep't.....
Tabor, Francis.....	Vermont.....	Chas. Langley & Co.....
Tibbitts, L. C.....	Pittsburg.....	J. R. Gates.....
Wanzer, Mrs. L. M. F.....		Student Med. Dep't.....
Wilcox, W. J.....	Flint, Mich.....	

Members of the California Pharmaceutical Society.

Abramson, E., San Francisco.
 Adams, G. R., San Francisco.
 Adams, S. R., San Francisco.
 Ambler, B., San Francisco.
 Arnheim, J. S., San Francisco.
 Bacon, G. E., San Francisco.
 Bauer, J. A., San Francisco.
 Baxter, Ed., San Francisco.
 Bayley, C. A., San Francisco.
 Bennett, H. W., San Francisco.
 Bogel, T., Paris.
 Bosco, Otto, San Francisco.
 Broemmell, B., San Francisco.
 Bryan, Wm. J., San Francisco.
 Calvert, John, San Francisco.
 Colman, F. A., San Francisco.
 Conrad, C., San Francisco.
 Crane, H. A., San Francisco.
 Damrell, F. W., San Francisco.
 Dannenberg, Walter, San Francisco.
 Devine, J., San Francisco.
 Dixon, A., San Francisco.
 Dowdall, R. E., San Francisco.
 Drassel, J. H., San Francisco.
 Evans, A., San Francisco.
 Fleming, A., San Leandro.
 Frost, J. W., Vallejo.
 Gates, J. R., San Francisco.
 Geary, Wm., San Francisco.
 Gerichten, P., San Francisco.
 Gerlach, G., San Francisco.
 Glass, Louis, Cherokee Flat.
 Gros, A., San Francisco.
 Hassenpflug, F., San Francisco.
 Heitshu, S., San Francisco.
 Hillmer, L., San Francisco.
 Hohlweg, Fred., San Francisco.
 Holz, P. F., San Francisco.
 Horst, Hugo, San Francisco.
 Howland, C. F., San Francisco.
 Hunt, D. D., San Francisco.
 Kearney, P. A., San Francisco.
 Kendall, C. B., San Francisco.
 Keith, Wm. H., San Francisco.
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 Kurtz, A. M., San Francisco.
 Lefevre, B., San Francisco.
 Lengfeld, A. L., San Francisco.
 Livermore, H. P., San Francisco.

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 Luedinghansen, O. W., San Francisco.
 Mayhew, Wm. E., San Francisco.
 McBoyle, A., San Francisco.
 McPhail, J., San Francisco.
 Mervay, A., San Francisco.
 Miller, W. C., San Francisco.
 Moffatt, J. W., San Francisco.
 Moffitt, Thomas S., San Francisco.
 Moody, J. C., San Francisco.
 Newman, John, San Francisco.
 Newman, J. H., San Francisco.
 Newman, S., San Francisco.
 Nola, Leon de, San Francisco.
 Nowers, Wm. P., San Francisco.
 O'Keefe, Wm. H., San Francisco.
 Painter, E., San Francisco.
 Parks, James, San Francisco.
 Petibeu, E., San Francisco.
 Pickering, Wm., San Francisco.
 Piquet, E., San Francisco.
 Redington, J. H., San Francisco.
 Redington, Wm. P., San Francisco.
 Richards, C. F., San Francisco.
 Roethe, C., San Francisco.
 Rotanzi, G., San Francisco.
 Roturier, C., San Francisco.
 Rule, J. W., San Francisco.
 Sanford, E. P., Oakland.
 Sanford, R. A., San Francisco.
 Schmidt, C., San Francisco.
 Schmidt, H. W., San Francisco.
 Searby, W. M., San Francisco.
 Shaw, H. B., San Francisco.
 Simpson, Wm., San Francisco.
 Spittler, Geo. J., Colusa.
 Steele, H., San Francisco.
 Steele, James G., San Francisco.
 Szarvash, S. T., San Francisco.
 Thayer, B. B., San Francisco.
 Topley, James, Vallejo.
 Tschirner, Max, San Francisco.
 Wakelee, H. P., San Francisco.
 Webber, M., Oakland.
 Wenzell, W. T., San Francisco.
 Widber, J. H., San Francisco.
 Wright, A., Healdsburg.
 Wood, Wm. H., San Francisco.
 Zeile, Chas., San Francisco.

HONORARY MEMBERS.

Colcord, T. W., Boston, Mass.
 Ebert, A. E., Chicago, Ill.
 Falkenau, L. R., San Francisco.
 Gibbons, Dr. H., San Francisco.
 Gibbons, Dr. H. Jr., San Francisco.
 Hanks, H. G., San Francisco.

Maisch, J. M., Philadelphia, Pa.
 Metcalf, T., Boston, Mass.
 Sharkey, Dr. J. M., San Francisco.
 Squibb, Dr. G. R., Brooklyn, N. Y.
 Tufts, C. H., Dover, N. H.

ALPHABETICAL LIST

OF THE

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IN THE

UNITED STATES,

Who grant the Degree of Graduate in Pharmacy only to Students who have had four years' actual experience in the Apothecary business previous to passing examination:—

California College of Pharmacy	- - -	San Francisco, Cal.
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Cincinnati College of Pharmacy	- - -	Cincinnati, O.
Louisville College of Pharmacy	- - -	Louisville, Ky.
Maryland College of Pharmacy	- - -	Baltimore, Md.
Massachusetts College of Pharmacy	- -	Boston, Mass.
New York College of Pharmacy	- - -	New York, N. Y.
Philadelphia College of Pharmacy	- - -	Philadelphia, Pa.
St. Louis College of Pharmacy	- - -	St. Louis, Mo.

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W. S. Rice N.Y.

B. J. Suffer

J. H. Hammond ✓

Rev. E. S. Payne

E. B. Kendrick

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